UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,522	09/28/2005	Thure Etzold	833.1002	7822

23280   7590   12/24/2008
Davidson, Davidson & Kappel, LLC
485 7th Avenue
14th Floor
New York, NY 10018

EXAMINER
RAAB, CHRISTOPHER J

ART UNIT	PAPER NUMBER
2169	

MAIL DATE	DELIVERY MODE
12/24/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2004*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-42* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-42* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *28 September 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Preliminary Amendment

01.   The present Office Action is based upon the original patent application filed on

09/28/04 as modified by the preliminary amendment filed on 09/28/04. **Claims 1 – 42**

are now pending in the present application.

Priority

02.   Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which

papers have been placed of record in the file.

Drawings

03.   The drawings were received on **09/28/04**. These drawings are accepted.

Claim Objections

04.   **Claim 1** is objected to because of the following informality:

a) replace "ore" with –or–

Claims 4 and 5 is objected to because of the following informality:

a) replace "data-base" with –database–

Claim Rejections – 35 USC § 112

05.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention

06.   **Claim 9** recites the limitation "said second searchable entity". There is

insufficient antecedent basis for this limitation in the claim. It is believed claim 9 was

intended to depend on claim 5 and has been treated as such for the remainder of this

Office Action. Appropriate correction is required.

Claim Rejections - 35 USC § 101

07.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or
> composition of matter, or any new and useful improvement thereof, may obtain a patent therefor,
> subject to the conditions and requirements of this title.

08.   **Claims 1 – 37** are rejected under 35 U.S.C. 101 because the claimed invention

is directed to non-statutory subject matter. The claims are directed towards a method of

querying a relational database. According to MPEP § 2106.IV.B, the first step in

determining whether a claim recites patent eligible subject matter is to determine

whether the claim falls within one of the four statutory categories of invention recited in

35 U.S.C. 101: process, machine, manufacture and composition of matter. The latter

three categories define "things" or "products," while a "process" consists of a series of

steps or acts to be performed. For purposes of §101, a "process" has been given a

specialized, limited meaning in the courts. Based on a Supreme Court precedent and

recent Federal Circuit decisions, a claimed process is patent-eligible under §101 if: (1) it

is tied to a particular machine or apparatus, or (2) it transforms a particular article into a

different state or thing." Since the claim fails to meet the requirements mentioned

above to place the claim in the statutory category of a process, the claim fails to fall

within one of the four statutory categories (i.e., process, machine, manufacture, or

composition of matter).

09.   **Claim 40** is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. The claim is directed towards a data

processing system, which contains the steps of both claim 38, from which claim 40

depends, and the steps of claim 1. Therefore claim 40 contains all of the steps from

both claims 38 and 1, which does not fall under on of the four statutory categories of

invention recited in 35 U.S.C. 101. Also, claim 40 recites *means for* claim language, as

does claim 38, however claim 1 is a method claim. Claim 40 is therefore non-statutory

under 35 U.S.C. 101 because it contains both *means for* claim language and a method

claim for the same subject matter.

10.   **Claims 41 – 42** are rejected under 35 U.S.C. 101 because the claimed invention

is directed to non-statutory subject matter. The claims lack the necessary physical

articles or objects to constitute a machine or a manufacture within the meaning of 35

USC 101. They are clearly not a series of steps or acts to be a process nor are they a

combination of chemical compounds to be a composition of matter. As such, they fail to

fall within a statutory category. They are, at best, function descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive

material" or "nonfunctional descriptive material." Both types of "descriptive material" are

nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d

at 1759. When functional descriptive material is recorded on some computer-readable

medium, it becomes structurally and functionally interrelated to the medium and will be

statutory in most cases since use of technology permits the function of the descriptive

material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d

1031, 1035 (Fed. Cir. 1994).

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on

a computer-readable medium, in a computer, or on an electromagnetic carrier signal,

does not make it statutory. See *Diehr*, 450 U.S. at 185-86, 209 USPQ at 8 (noting that

the claims for an algorithm in *Benson* were unpatentable as abstract ideas because

"[t]he sole practical application of the algorithm was in connection with the programming

of a general purpose computer.").

Claim 41 recites a computer program, which causes a computer (system) to

perform method steps. However, both the computer program and the computer system

do not contain hardware components, and can be considered software per se.

Therefore, claim 41 is rejected under 35 U.S.C. 101 for lacking the necessary physical

components to constitute a machine or manufacture.

Claim 42 recites a computer readable storage medium, comprising a program

according to claim 41. The computer readable storage medium does not contain

hardware components, and can be considered software per se. Also, claim 42 depends

from claim 41, which also suffers from lacking the necessary physical components to

constitute a machine or manufacture. Therefore, claim 42 is rejected under 35 U.S.C.

101 for both of these reasons.

Claim Rejections - 35 USC § 102

11.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office Action:

A person shall be entitled to a patent unless –

> (b) the invention was patented or described in a printed publication in this or a foreign country or
> in public use or on sale in this country, more than one year prior to the date of application for
> patent in the United States.

12.   **Claims 1 – 16, 32, and 38 – 42** are rejected under 35 U.S.C. 102(b) as being

unpatentable over **Lohman et al. (US Patent 5,930,785)**, hereinafter 'Lohman'.

Consider **claim 1**, Lohman discloses a method of querying a relational database

(read as a method of evaluating a query involving at least one relational database

comprising a relational database management system (RDBMS)) (column 3 lines 27 –

43), the query relating to tables (read as said query relating to at least one table of said

relational database) (column 3 lines 10 – 43), comprising:

locating a large or main table as a reference table (read as determining a table of

said relational database as a gateway table related to one or more entries in a table to

be queried) (column 3 lines 10 – 43) which provide access to other tables (read as

retrieving one or more unique identifiers of said gateway table related to one or more

entries in a table to be queried) (column 3 lines 10 – 43);

the query operable to return data from the database (read as retrieving

information from one or more table to be queried related to said retrieved unique

identifiers of said gateway table) (column 3 lines 27 – 43);

executing the query to obtain a result (read as providing a result to said query)

(column 3 lines 44 – 67).

Consider **claim 2**, and **as applied to claim 1 above**, Lohman discloses a

method such that hub tables are used, such that a query related to the hub tables,

which can be a gateway to other related tables in order to return data from the tables

(read as said relational database comprises one or more predetermined hub tables and

said query relates to at least one table of said relational database and retrieving one or

more unique identifiers of a hub table related to one or more entries in a table to be

queried, retrieving information from tables to be queried related to said retrieved unique

identifiers of said hub table, and providing a result to said query) (column 3 lines 10 –

43).

Consider **claim 3**, and **as applied to claim 1 above**, Lohman discloses a

method such that hub tables can have tables linked to it (read as at least one library is

defined on one or more of said databases, said library consisting of tables linked to

each other and having exactly one table defined as a hub table) (column 8 lines 32 –

40).

Consider **claim 4**, and **as applied to claim 1 above**, Lohman discloses a

method such that the query can be for a set of tables in the relational database, such

that a hub table can be defined for purpose of identifying the tables for the query (read

as said query is for complete sets of related entries of said relational database or of a library or for parts of such complete sets of related entries and comprises one or more query conditions related to said data-base or library, wherein said method further comprises: identifying a gateway table related to entries specified in a query condition, identifying one or more unique identifiers of said gateway table related to said entries conforming to query conditions, and retrieving complete sets of related entries or part thereof which are related to said unique identifiers of said gateway table) (column 5 lines 23 – 44).

Consider **claim 5**, and **as applied to claim 2 above**, Lohman discloses a method such that any tables in the relational database can be accessed as part of the query execution (read as said query involves at least a second searchable entity outside said database or outside a library involved in said query, said second entity comprising sub-entity each having at least one identifier uniquely identifying said sub-entities, and wherein said method further comprises retrieving one or more identifiers of sub-entities of said second searchable entity related to said query, retrieving one or more unique identifiers of a hub table of said relational data- base or library related to said retrieved identifiers of said sub-entities, retrieving sets of related entries or predetermined parts thereof related to said retrieved unique identifiers of said hub table, retrieving information from a sub-entity identified by a retrieved identifier in said second entity, and combining the retrieved information from said second searchable entity and said data base or library into a result) (column 7 lines 5 – 67).

Consider **claim 6**, and **as applied to claim 2 above**, Lohman discloses a method such that any tables in the relational database can be accessed as part of the query execution (read as said query involves at least a second searchable entity outside said database or outside a library involved in said query and comprising sub-entities, each sub-entity having at least one identifier uniquely specifying said sub-entity, and wherein said method further comprises: retrieving one or more unique identifiers of a hub table of said database or library related to entries related to said query, retrieving identifiers of sub-entities of said second searchable entity related to said retrieved unique identifiers of said hub table, retrieving sets of related entries or predetermined parts thereof related to said retrieved unique identifiers of said hub table, retrieving information from said sub-entities identified by identifiers retrieved in said second searchable entity, and combining the retrieved information from said second entity and said data base or library into a result) (column 7 lines 5 – 67).

Consider **claim 7**, and **as applied to claim 5 above**, Lohman discloses a method such that a unique hub table can be used (read as said second searchable entity is a relational database and said identifier is unique identifier of a hub table in said relational database) (column 3 lines 27 – 67).

Consider **claim 8**, and **as applied to claim 6 above**, Lohman discloses a method such that a unique hub table can be used (read as said second searchable entity is a relational database and said identifier is unique identifier of a hub table in said relational database) (column 3 lines 27 – 67).

Consider **claim 9**, and **as applied to claim 7 above**, Lohman discloses a

method such that query is executed against only the hub table and tables that are part

of the query (read as said step of retrieving a relation between identifiers of said second

searchable entity and unique identifiers of hubs of said database or library comprises

the step of discarding combinations of identifiers of hubs with identifiers of said second

searchable entity which are not consistent with the query conditions and retrieving only

such additional information related to an identifier which is comprised in a combination

of identifiers consistent with the selection parameters) (column 6 lines 17 – 56).

Consider **claim 10**, and **as applied to claim 2 above**, Lohman discloses a

method such that the query can relate to multiple hub tables (read as the query related

to tables related to at least two hub tables, and wherein said method further comprises,

retrieving one or unique identifiers of a hub table or hub tables, said identifier being

related to entries satisfying query conditions in tables related to the respective hub,

retrieving unique identifiers of the respective other hub or hubs related to said retrieved

unique identifiers related to entries satisfying the query conditions, retrieving sets of

related entries or predetermined parts thereof, which are related to said retrieved unique

identifiers of said hubs according to the query, and combining the retrieved information

related to said hubs into a result) (column 8 lines 25 – 55).

Consider **claim 11**, and **as applied to claim 10 above**, Lohman discloses a

method such that the query only returns data where the conditions are met (read as

said step of retrieving a relation between unique identifiers of said hub tables comprises

the step of discarding combinations of unique identifiers of hub tables which are not

consistent with the query conditions and retrieving only such additional information related to a unique identifier which is comprised in combinations of unique identifiers consistent with the search parameters) (column 3 lines 10 – 67).

Consider **claim 12**, and **as applied to claim 10 above**, Lohman discloses a method such that hub tables can have tables linked to it (read as at least one of said hubs is a hub of a library and the query related to said library) (column 8 lines 32 – 40).

Consider **claim 13**, and **as applied to claim 12 above**, Lohman discloses a method such that hub tables can have tables linked to it in the relational database (read as said two hubs are hubs within the same relational database) (column 8 lines 32 – 40).

Consider **claim 14**, and **as applied to claim 10 above**, Lohman discloses a method such that hub tables can have tables linked to it in the relational database (read as said two hubs are hubs within the same relational database) (column 8 lines 32 – 40).

Consider **claim 15**, and **as applied to claim 4 above**, Lohman discloses a method such that tables can be linked prior to querying (read as the step of retrieving unique identifiers of a hub table and/or identifiers of a searchable entity which are related to another unique identifier of a hub table and/or identifier of a searchable entity is performed on the basis of pre-established relations between identifiers of said entities) (column 3 lines 27 – 43).

Consider **claim 16**, and **as applied to claim 4 above**, Lohman discloses a method such that a query execution plan is determined on the basis of the query (read

as step of retrieving unique identifiers of a hub table and/or identifiers of a searchable entity which are related to another unique identifier of a hub table and/or identifier of a searchable entity is performed dynamically during the execution of the query) (column 3 lines 10 – 43).

Consider **claim 32**, and **as applied to claim 1 above**, Lohman discloses a method such that tables are optimized though queries for subsequent query execution (read as partial queries used for evaluation the initial query are at least partially created dynamically during the process of said evaluation) (column 5 lines 8 – 23).

Consider **claim 38**, Lohman discloses a system of querying a relational database (read as data processing system for controlling the evaluation of a query involving a relational database comprising a relational database management system (RDBMS)) (column 3 lines 27 – 43), the query relating to tables (read as said query relating to at least one table of said relational database) (column 3 lines 10 – 43), comprising:

locating a large or main table as a reference table (read as means for determining a table as a gateway table for evaluating said query, means for establishing a relation between a table or tables to be queried and a gateway table) (column 3 lines 10 – 43) which provide access to other tables (read as means for causing the RDBMS to retrieve one or more unique identifier of said gateway table related to one or more entries in a table to be queried) (column 3 lines 10 – 43);

the query operable to return data from the database (read as means for causing the RDBMS to retrieve information from tables to be queried related to said retrieved unique identifier of said entry) (column 3 lines 27 – 43);

executing the query to obtain a result (read as means for providing or causing to be provided a result to said query) (column 3 lines 44 – 67).

Consider **claim 39**, and **as applied to claim 38 above**, Lohman discloses a system such that the hub tables can be pre-defined (read as means for setting certain tables in said relational database as predetermined gateway tables for queries to be evaluated) (column 3 lines 10 – 26).

Consider **claim 40**, and **as applied to claim 38 above**, Lohman discloses a system for carrying out the method of claim 1 (read as means for controlling the execution of a method according to claim 1 by a data processing system of data processing systems) (abstract).

Consider **claim 41**, Lohman discloses a computer for carrying out the method of claim (read as a computer program causing a computer or computer system, when executed thereon, to perform the steps of a method according to claim 1) (column 1 lines 7 – 22).

Consider **claim 42**, Lohman discloses a computer readable storage medium (read as a computer readable storage medium, comprising a program according to claim 41) (abstract, column 1 lines 7 – 22).

Claim Rejections - 35 USC § 103

13.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious

at the time the invention was made to a person having ordinary skill in the art to which said
subject matter pertains. Patentability shall not be negatived by the manner in which the invention
was made.

14.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or
        nonobviousness.

15.   **Claims 17 – 31, and 33 – 37** are rejected under 35 U.S.C. 103(a) as being

unpatentable over **Lohman et al. (US Patent 5,930,785)**, hereinafter 'Lohman', in view

of **Kaplan et al. (US Patent 5,701,460)**, hereinafter 'Kaplan'.

Consider **claim 17**, and **as applied to claim 1 above**, Lohman discloses a

method of querying a relational database, but does not specifically disclose a graphical

representation of the database.

In the same field of endeavor, Kaplan discloses a method such that a graphical

representation of the database and tables are displayed (read as said step of retrieving

information related to a unique identifier of said gateway table, selected tables are

queried which, in a graphical representation of the database wherein the tables are

represented as nodes and links between the tables are represented as lines between

the nodes, form a connected graph connecting the gateway table to tables referred to in

the initial query) (column 3 lines 25 – 65).

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to incorporate the graphical representation taught by Kaplan

into the relational database querying taught by Lohman for the purpose of allowing for visual display of the query execution.

Consider **claim 18**, and **as applied to claim 17 above**, Lohman discloses a method such that a query can be used to optimize later query execution (read as said step of querying tables on said graph comprises performing consecutive partial queries, wherein a result of a previous query is used as input for a later query, a first of said partial queries involving the gateway table and a query other than the first query relating to a table referred to in the initial query) (column 3 lines 10 – 43).

Consider **claim 19**, and **as applied to claim 18 above**, Kaplan discloses a method such that foreign keys are used in the querying of the database (read as said result of said previous query comprises the value of a foreign key of a table involved in said later query and wherein said value of said foreign key is used as input for said later query) (column 5 line 46 – column 6 line 8).

Consider **claim 20**, and **as applied to claim 18 above**, Lohman discloses a method such that the query result is saved (read as the result of said partial queries is stored as an objects or objects) (column 5 lines 8 – 44).

Consider **claim 21**, and **as applied to claim 18 above**, Kaplan discloses a method such that redundant data is accounted for (read as after each partial query a redundancy check is carried out in the respective result and the result purged of redundancies) (column 5 lines 4 – 24, column 5 line 46 – column 6 line 8).

Consider **claim 22**, and **as applied to claim 21 above**, Lohman discloses a method such that redundant data is minimized for the data (read as said redundancy

check is carried out in creating said object comprising the result of said partial query or directly on said object after creation of the same) (column 5 lines 4 – 24, column 5 line 46 – column 6 line 8).

Consider **claim 23**, and **as applied to claim 18 above**, Lohman discloses a method such that the query involves multiple tables, such that the tables can be linked together) (column 3 lines 10 – 43).

Consider **claim 24**, and **as applied to claim 18 above**, Lohman discloses a method such that the hub table links tables together (read as said graph comprises at least one branch node having links to at least two other nodes and wherein tables referred to in the initial query are related to separate branches deriving from said branch node, wherein a partial query is carried out involving the table corresponding to said branch node (branch table) and wherein at least one partial query is carried out for one or more tables contained in each branch which has the result of the partial query involving the branch table as an input) (column 3 lines 27 – 67).

Consider **claim 25**, and **as applied to claim 18 above**, Kaplan discloses a method such that a graphical representation of the database and tables are displayed (read as identifying the hub table or hub tables related to tables referred to in the initial query, determining in said graphical representation of said database, at least for one hub table, an optimum graph connecting said hub to all tables which are related to said hub and which are referred to in the initial query, and performing consecutive partial queries involving tables which are consecutive to each other with regard to said optimum graph) (column 3 lines 25 – 65).

Consider **claim 26**, and **as applied to claim 1 above**, Lohman discloses a

method of querying a relational database, but does not specifically disclose a graphical

representation of the database.

In the same field of endeavor, Kaplan discloses a method such that a graphical

representation of the database and tables are displayed (read as said step of retrieving

unique identifiers of said gateway table comprises: determining a table that is referred to

in the initial query, determining, in a graphical representation of said database, wherein

tables are represented as nodes and links between tables as lines between the nodes,

a gateway table connected to said table, and querying said database for one or more

indices of the gateway table which are related to said table) (column 3 lines 25 – 65).

Therefore it would have been obvious to one of ordinary skill in the art at the time

the invention was made to incorporate the graphical representation taught by Kaplan

into the relational database querying taught by Lohman for the purpose of allowing for

visual display of the query execution.

Consider **claim 27**, and **as applied to claim 26 above**, Lohman discloses a

method such that parts of the query can be implied in the query (read as one or more

specific entries of said table are implied by a query condition and said database is

queried for indices of said gateway table which are related to said entry or entries)

(column 2 lines 22 – 52).

Consider **claim 28**, and **as applied to claim 26 above**, Lohman discloses a

method such that all necessary tables from the hub table are queried (read as said

graphical representation, a path from said table to said gateway table is established and

said query for said indices is performed by querying all tables corresponding to nodes in said graph for the values of link keys between the tables in said graph, starting from the table referred to in the query and, given the case, certain entries thereof) (column 3 lines 10 – 43).

Consider **claim 29**, and **as applied to claim 28 above**, Lohman discloses a method such that the query is optimized for the best table accessing (read as said path is selected as a shortest path between said table and said gateway table according to a predetermined metric) (column 3 lines 10 – 43).

Consider **claim 30**, and **as applied to claim 28 above**, Lohman discloses a method such that tables can be queried for the necessary information (read as said path is part of or identical to the graph for determining partial queries for retrieving additional information from tables related to said gateway table) (column 5 lines 8 – 44).

Consider **claim 31**, and **as applied to claim 26 above**, Lohman discloses a method such that certain tables are connected by the hub table (read as determining a unique identifier for one or more rows of the gateway table related to said indices, if an index or a group of indices related to the same row of the gateway table determined by said step of querying the database does not uniquely identify a row of said gateway table) (column 5 lines 8 – 44).

Consider **claim 33**, and **as applied to claim 1 above**, Lohman discloses a method of querying a relational database, but does not specifically disclose objects.

In the same field of endeavor, Kaplan discloses that tables are made up of objects, and that they can be represented as such (read as said result is represented in an object oriented representation) (column 1 lines 11 – 45).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the object representation taught by Kaplan into the relational database querying taught by Lohman for the purpose of allowing objects to be displayed as objects, as a result of the query execution.

Consider **claim 34**, and **as applied to claim 33 above**, Kaplan discloses a method such that the query returns objects (read as the result of said initial query is expressed as an object derived by means of object-relational mapping) (column 1 lines 11 – 45).

Consider **claim 35**, and **as applied to claim 1 above**, Lohman discloses a method of querying, but does not specifically disclose an object manager.

In the same field of endeavor, Kaplan discloses a method such that the objects are controlled by the query (read as said query is performed under the control of an object manager, said object manager comprising a sequence of commands to be executed by a computer system) (column 6 lines 17 – 45).

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the object management taught by Kaplan into the relational database querying taught by Lohman for the purpose of allowing objects to be managed as a result of query execution.

Consider **claim 36**, and **as applied to claim 35 above**, Kaplan discloses a

method such that schema is used during querying (red as said object manager handles

an object which represents the schema or part of a schema of one or more databases

to be queried) (column 3 lines 25 – 65).

Consider **claim 37**, and **as applied to claim 35 above**, Lohman discloses a

method such that tables are optimized through queries for subsequent querying (read

as said object manager defined classes which are dynamically created and instantiated)

(column 5 lines 8 – 44).

Conclusion

16.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

a) Kuman, Arun et al.	US Patent	6,976,015
b) Funk, Merritt	US PGPub	2005/0165731
c) Gray, James E.	US Patent	5,758,335
d) Jocopi, Thomas W.	US Patent	5,287,493
e) Cheng, Josephine M. et al.	US Patent	5,241,648

17.   Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed**

to:

        Commissioner for Patents
        P.O. Box 1450
        Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

> Customer Service Window
> Randolph Building
> 401 Dulany Street
> Alexandria, VA 22314

18.   Any inquiry concerning this communication or earlier communications from the

Examiner should be directed to Christopher Raab whose telephone number is (571)

270-1090. The Examiner can normally be reached on Monday-Friday from 8:30am to

6:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's

supervisor, Pierre Vital can be reached on (571) 272-4215. The fax phone number for

the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should you

have questions on access to the Private PAIR system, contact the Electronic Business

Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist/customer service whose telephone

number is (571) 272-2600.

Christopher Raab
C.R./cr

December 18, 2008

/Pierre M. Vital/
Supervisory Patent Examiner, Art Unit 2169